NHD Reach Indexing Tool (NHD-RIT) Data Structure for Events, Metadata, and Transaction Tables

September 12, 2001

Version 3.2.0

Version History

Version 2.0.0	March 27, 2001	
Version 3.0.0	May 21, 2001	Updated to include non-NHD shapefiles
Version 3.1.0	June 4, 2001	Updated to include linear non-NHD shapefiles and fixed typo in the values/format column of the enttypds field.
Version 3.2.0	September 12, 2001	Updated to include detailed descriptions of possible field values.

Table 1. NHD-RIT Event Table Structure - Linear Event Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
F_Meas	From measure	N(7,3)	0-200	required
T_Meas	To measure	N(7,3)	0-200	required
Eoffset	Event display offset	N(12,7)	0-9999.9999999	required, default=0
DUU_ID	NHD Digital Update Unit (DUU) Identifier	N(10)	0-9999999999 (from the NHD Transport Reach theme)	required to link event to 'version' of NHD used for indexing
Rch_code	NHD linear reach code	C(14)	ccccccccnnnnnn	required
Rch_Date	NHD linear reach date	Date	yyyymmdd	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]

Field Name	Description	DBF	Values	Notes
State	State Abbreviation	C(2)		optional
Meters	Length of event in Meters	N(12,0)	0-999999999999	required[2]
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type PolylineM

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

[2] In the NHD-RIT the size of the event is calculated during the bundle export process. The size is not maintained throughout the indexing session.

Table 2. NHD-RIT Event Table Structure - Point Event Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
P_Meas	Point measure	N(7,3)	0-200	required
Eoffset	Event display offset	N(12,7)	0-9999.9999999	required, default=0
DUU_ID	NHD Digital Update Unit (DUU) Identifier	N(10)	0-9999999999 (from the NHD Transport Reach theme)	required to link event to 'version' of NHD used for indexing
Rch_code	NHD Linear Reach Code	C(14)	ccccccccnnnnnn	required
Rch_Date	NHD Linear Reach Date	Date	yyyymmdd	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]

Field Name	Description	DBF	Values	Notes
State	State Abbreviation	C(2)		optional
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type Multipoint

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

Table 3. NHD-RIT Event Table Structure - Waterbody Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
DUU_ID	NHD DUU Identifier	N(10)	0-9999999999 (from the NHD Transport Reach theme)	required to link event to 'version' of NHD used for indexing
Rch_code	NHD Waterbody Reach Code	C(14)	ccccccccnnnnnn	required
Rch_Date	NHD Waterbody Reach Date	Date	yyyymmdd	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]
State	State Abbreviation	C(2)		optional

Field Name	Description	DBF	Values	Notes
Sq_km	Area of event in square kilometers	N(18,3)	0-99999999999999.999	required[2]
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type Polygon

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

[2] In the NHD-RIT the size of the event is calculated during the bundle export process. The size is not maintained throughout the indexing session.

Table 4. NHD-RIT Non-NHD Shapefiles - Waterbody Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]
State	State Abbreviation	C(2)		optional
Sq_km	Area of shape in square kilometers	N(18,3)	0-99999999999999.999	required[2]

Field Name	Description	DBF	Values	Notes
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type Polygon

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

[2] In the NHD-RIT the size of the event is calculated during the bundle export process. The size is not maintained throughout the indexing session.

Table 5. NHD-RIT Non-NHD Shapefiles - Point Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]
State	State Abbreviation	C(2)		optional
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type Multipoint

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

Table 6. NHD-RIT Non-NHD Shapefiles - Linear Table *

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
Attr_Prg	Attribute Type/Program being indexed	C(30)	free text	required[1]
Attr_Val	Attribute Value being indexed	C(20)	free text	required[1]
Entity_ID	Foreign Key to external database	C(60)	free text	required[1]
State	State Abbreviation	C(2)		optional
Meters	Length of shape in Meters	N(12,0)	0-999999999999	required[2]
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required

* Note: Shapes are associated with these tables that are of type PolylineM

[1] Each index must have at least Attr_Prg/Attr_Val or Entity_ID. Some indexing applications simply tie an attribute to a reach with no external database reference. These applications can use Attr_Prg and Attr_Val. The Entity_ID field is used to link the event to an external database. The RIT supports both types of indexing.

[2] In the NHD-RIT the size of the event is calculated during the bundle export process. The size is not maintained throughout the indexing session.

Table 7. NHD-RIT Event/Shapefile Transaction Table Structure

Field Name	Description	DBF	Values	Notes
Event_ID	Unique Event Identifier	C(19)	Created by the NHD-RIT using a date + time sequence and a 5 character sequential code (yyyymmddhhmmssnnnnn).	required
Trans	Transaction Type	C(1)	A = Add M = Modify D = Delete	required
Ttime	Time of Transaction	C(14)	yyyymmddhhmmss	optional

Table 8. NHD-RIT Metadata Transaction Table Structure

Field Name	Description	DBF	Values	Notes
Meta_ID	Unique Metadata Identifier	C(18)	Created by the NHD-RIT using a date + time sequence and a 4 character sequential code (yyyymmddhhmmssnnnn).	required
Trans	Transaction Type	C(1)	A = Add M = Modify D = Delete	required
Ttime	Time of Transaction	C(14)	yyyymmddhhmmss	optional

Table 9. NHD-RIT Metadata Table Structure

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
META_ID	ID of the metadata entry	C(18)	yyyymmddhhmmssnnnn	Y	A	eainfo-detailed-enttype-enttypl
ORIGIN	Person/Agency who created the data	C(50)	Free Text. Acronym or name of the Agency that is doing the indexing to NHD (EPA, USGS, ect).	Y	Y	idinfo-citation-citeinfo-origin
PUBDATE	When the data source was released to the public	Date	yyyymmdd	Y	A	idinfo-citation-citeinfo-pubdate
TITLE	Title of the metadata entry	C(30)	Free Text. Title associated with this metadata entry (NHD-RIT default is the title of the event table)	Y	Y	idinfo-citation-citeinfo-title

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SUPPLINFO	Supplemental Information.	C(254)	For linear/point events and waterbody shapefiles, RIT populates the 1st part of this field with the NHD Fod2Arc version, NHD can date, ESRI Type (Coverage/Shapefile), Data Structure Version number separated by \\ . (e.g. NHD Fod2Arc version 1.80\\ NHD can date 11/04/1999\\ ESRIType Shapefile\\ Data Structure Version 2.0.0\\). For non-NHD point/polygon shapefiles only the Data Structure version followed by \\ is included. User supplied supplemental information is included after this text - allows 100 characters of user supplied text.	N	A (user can also add additional information to this field). For event tables created without the RIT, NHD Fod2Arc version, NHD can date, ESRI Type, Data Structure Version number separated by \\ are still required.	idinfo-descript-supplinf
NATIVE	Contains the version of the software (RIT) used to create the events	C(30)	Free Text (ex. NHD-RIT version 1.53)	N	A	idinfo-native
ABSTRACT	Brief description of the content in the data	C(254)	Free Text. Example: "Linear and point events representing assessed waters under the Clean Water Act section 305(b) for the state."	Y	Y	idinfo-descript-abstract
PURPOSE	Intended purpose of the data	C(30)	Free Text. Name or Acronym of the program the data are associated with (ex 303(d), WQS, FCA, BEACHES)	Y	Y	idinfo-descript-purpose
BEGDATE	When the content was initially created	Date	yyyymmdd	Y	A	idinfo-timeperd-rngdates-begdate

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE	When the content was updated the last time	Date	yyyymmdd	Y	A	idinfo-timeperd-rngdates-enddate
D_CURRENT	The basis on which the time period of content information is determined	C(35)	Free Text. Current convention is to indicate the year the indexing data should be considered current or the time period the data apply to.	Y	Y	idinfo-timeperd-current
PROGRESS	Specifies if the content is currently worked on	C(30)	3 options: - “Complete” - “In Work” - “Planned”	Y	Y (‘In work’)	idinfo-status-progress
D_UPDATE	Describes how often the data content is updated	C(30)	Free Text. NHD-RIT offers the following options: - “Continually” - “Weekly” - “Monthly” - “Annually” - “Unknown” - “As Needed” - “Irregular” - “ None Planned”	Y	Y (‘As needed’)	idinfo-status-update
WESTBC	The most westerly coordinate	N(20,8)	-180.0<= West Bounding Coordinate <= 180	Y	A	idinfo-spdom-westbc

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SOUTHBC	The most south coordinate	N(20,8)	-90.0<= South Bounding Coordinate <= 90; South Bounding Coordinate <=North Bounding Coordinate	Y	A	idinfo-spdom-southbc
NORTHBC	The most north coordinate	N(20,8)	-90.0<= North Bounding Coordinate <= 90; North Bounding Coordinate >=South Bounding Coordinate	Y	A	idinfo-spdom-northbc
EASTBC	The most easterly coordinate	N(20,8)	-180.0<= East Bounding Coordinate <= 180	Y	A	idinfo-spdom-eastbc
THEMEKT	Reference to a formally registered thesaurus or a similar authoritative source of theme keywords	C(4)	“None”, Free Text.	Y	A	idinfo-keywords-theme-themekt
THEMEKEY1	Common-use word or phrase used to describe the subject of the data set (1st)	C(40)	Free Text. Program name, associated database name, content descriptors, etc.	Y	Y	idinfo-keywords-theme-themekey
THEMEKEY2	Common-use word or phrase used to describe the subject of the data set (2nd)	C(40)	Free Text. Program name, associated database name, content descriptors, etc.	N	N	idinfo-keywords-theme-themekey
THEMEKEY3	Common-use word or phrase used to describe the subject of the data set (3rd)	C(40)	Free Text. Program name, associated database name, content descriptors, etc.	N	N	idinfo-keywords-theme-themekey
THEMEKEY4	Common-use word or phrase used to describe the subject of the data set (4th)	C(40)	Free Text. Program name, associated database name, content descriptors, etc.	N	N	idinfo-keywords-theme-themekey

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
THEMEKEY5	Common-use word or phrase used to describe the subject of the data set (5th)	C(40)	Free Text. Program name, associated database name, content descriptors, etc.	N	N	idinfo-keywords-theme-themekey
PLACEKT	Reference to a formally registered thesaurus or a similar authoritative source of place keywords	C(4)	"None", "Geographic Names Information System", Free Text.	N	A	idinfo-keywords-place-placekt
PLACEKEY1	The geographic name of a location covered by a data set (1st)	C(40)	Free Text. State, county, or other geographic or political area	Y	Y	idinfo-keywords-place-placekey
PLACEKEY2	The geographic name of a location covered by a data set (2nd)	C(40)	Free Text. State, county, or other geographic or political area	N	N	idinfo-keywords-place-placekey
PLACEKEY3	The geographic name of a location covered by a data set (3rd)	C(40)	Free Text. State, county, or other geographic or political area	N	N	idinfo-keywords-place-placekey
ACCCONST	Restrictions and legal prerequisites for accessing the data set	C(7)	Free Text, "Unknown", "None"	Y	A	idinfo-accconst
USECONST	Restrictions and legal prerequisites for using the data set after access is granted	C(7)	Free Text, "Unknown", "None"	Y	A	idinfo-useconst
CNTPER	Name of contact person, if there are questions concerning the data	C(50)	Free Text. Note: The NHD-RIT populates this field with the User Information entered during the indexing session.	Y	N	idinfo-ptcontac-cntinfo-cntperp-cntper

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
CNTORG	Organization the person works for	C(50)	Free Text.	Y	N	idinfo-ptcontac-cntinfo-cntperp-cntorg
ADDRTYPE	What type of address is given below (mail/physical)	C(15)	Free Text, “Mail”, “Physical”, “Physical/Mail”	N	N	idinfo-ptcontac-cntinfo-cntaddr-addrtype
ADDRESS	Address of contact person	C(100)	Free Text.	N	N	idinfo-ptcontac-cntinfo-cntaddr-address
CITY	City of contact person	C(25)	Free Text.	N	N	idinfo-ptcontac-cntinfo-cntaddr-city
STATE	State of contact person	C(30)	Free Text.	N	N	idinfo-ptcontac-cntinfo-cntaddr-state
POSTAL	Zip code	C(11)	Free Text.	N	N	idinfo-ptcontac-cntinfo-cntaddr-postal
CNTVOICE	Voice phone number	C(10)	nnnnnnnnnn	N	N	idinfo-ptcontac-cntinfo-cntvoice
CNTFAC	Fax phone number	C(10)	nnnnnnnnnn	N	N	idinfo-ptcontac-cntinfo-cntaddr-cntfac
CNTEMAIL	E-mail of contact person	C(75)	Free Text.	N	N	idinfo-ptcontac-cntinfo-cntaddr-cntemail

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ATTRACCR	What is the accuracy of the data	C(254)	Free Text. The NHD-RIT populates with "The RIT verifies that all required attributes are entered into the event table; the RIT does not validate the attribute domains for user-entered attributes, nor does it verify that required attributes are populated in existing event tables."	Y	A	dataqual-attracc-attraccr
For linear/point event metadata table:						
HORIZPAR	An explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used	C(254)	Free Text, RIT populates with "Positional accuracy of events is as good as the accuracy of NHD since from/to end points are drawn in relation to NHD. Also, the process used to define the end points affects the accuracy. Currently no test is performed to identify event accuracy."	Y	A	dataqual-posacc-horizpar
ENTTYPD	The description of the entity type	C(254)	Free Text, RIT populates with "Events are used in conjuction with ESRI dynamic segmentation model and NHD. Events are grouped together based on source and indexer, and assigned an unique metadata ID"	Y	A	eainfo-detailed-enttype-enttypd
For waterbody metadata table:						

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
HORIZPAR	An explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used	C(254)	Free Text, RIT populates with "The position accuracy of the polygon is as good as the spatial accuracy of NHD, since the points are drawn in relation to the NHD data. In addition, the process used to create the polygons is also reflected in the accuracy"	Y	A	dataqual-posacc-horizpar
ENTTYPD	The description of the entity type	C(254)	Free Text, RIT populates with "Polygons are created based on the waterbody region feature in NHD, and grouped together based on source and indexer, and assigned an unique metadata ID"	Y	A	eainfo-detailed-enttype-enttypd
For non-NHD shapefile metadata table:						
HORIZPAR	An explanation of the accuracy of the horizontal coordinate measurements and a description of the tests used	C(254)	Free Text, RIT populates with "The position accuracy of the shape is as good as the original shapefile or the user defined delineation of the shape. In addition, the process used to create the shapes is also reflected in the accuracy"	Y	A	dataqual-posacc-horizpar
ENTTYPD	The description of the entity type	C(254)	Free Text, RIT populates with "'Shapes are created by the user and grouped together based on source and indexer, and assigned an unique metadata ID"	Y	A	eainfo-detailed-enttype-enttypd

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
LOGIC	an explanation of the fidelity of relationships in the data set and tests used	C(7)	Free Text, “Unknown”	Y	A	dataqual-logic
COMPLETE	information about omissions, selection criteria, generalization, definitions used, and other rules used to derive the data set	C(7)	Free Text, “Unknown”	Y	A	dataqual-complete
PROCDESC	What process was used to create the data	C(254)	Free Text. NHD-RIT offers the following options: - “Automated Conflation w/o DEM” - “Automated Conflation w/ DEM” - “Manual Conflation” - “Heads up digitizing”	Y	Y	dataqual-lineage-procstep-procdesc
SRCUSED	What sources are used to create the data	C(20)	‘All listed sources’	Y	A	dataqual-lineage-procsetp-srcused
PROCDATE	When was the data processed	Date	yyyymmdd – “Unknown”, “Not Complete”, free date	Y	A	dataqual-lineage-procstep-procdate

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
MAPPROJN	What is the projection of the data	C(50)	Free text, "Albers Conical Equal Area", "Azimuthal Equidistant", "Equidistant Conic", "Equirectangular", "General Vertical Near-sided Projection", "Gnomonic", "Lambert Azimuthal Equal Area", "Lambert Conformal Conic", "Mercator", "Modified Stereographic for Alaska", "Miller Cylindrical", "Oblique Mercator", "Orthographic", "Polar Stereographic", "Polyconic", "Robinson", "Sinusoidal", "Space Oblique Mercator", "Stereographic", "Transverse Mercator", "van der Grinten"	Y	A	spref-horizsys-planar-mapproj-mapprojn
FEAST	False easting information of coordinate system	N(20,10)	Free Real	N	A	spref-horizsys-planar-mapproj-…-feast
FNORTH	False northing information of coordinate system	N(20,10)	Free Real	N	A	spref-horizsys-planar-mapproj-…-fnorth
STDPARLL1	1st standard parallel of coordinate system	N(12,8)	-90.0<=1rst Standard Parallel<=90.0	N	A	spref-horizsys-planar-mapproj-…-stdparll
STDPARLL2	2nd standard parallel of coordinate system	N(12,8)	-90.0<=2nd Standard Parallel<=90.0	N	A	spref-horizsys-planar-mapproj-…-stdparll
LONGCM	Central meridian of coordinate system	N(12,8)	-180.0 <=Longitude of Central Meridian < =180.0	N	A	spref-horizsys-planar-mapproj-…-longcm

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
LATPROJ	Central parallel of coordinate system	N(12,8)	-90.0<=Latitude of Projection Origin<=90.0	N	A	spref-horizsys-planar-mapproj-…-latprjo
SFEQUAT	Scale factor of projection	N(12,8)	Scale Factor at Equator > 0.0	N	A	spref-horizsys-planar-mapproj-…-sfequat
HORIZDN	Datum of projection	C(40)	Free Text (ex. “North American Datum of 1983")	Y	A	spref-geodetic-horizdn
UNIT	Units of projection/coordinate system	C(10)	Free Text, “Degree”, “Meter”, etc.	Y	A	spref-horizsys-geograph-(geogunit)
DIRECT	the system of objects used to represent space in the data set	C(6)	‘Vector’	Y	A	spdoinfo-direct
S_NUMBER	Number of sources used	N(1,0)	0 - 9	Y	A	
ORIGIN1	Originator of 1st source	C(30)	Free Text, “ Unknown”. Acronym or name of the Agency that provided the information the reach indexing is based on. (EPA, USGS, ect).	Y	Y	dataqual-lineage-srcinfo-srccite-citeinfo-origin
TITLE1	Title/description of 1st source	C(150)	Free Text. Brief description of the source data (what it contains and what is the format).	Y	Y	dataqual-lineage-srcinfo-srccite-citeinfo-title

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SRCSCALE1	Scale of 1st source	C(12)	Free Text. NHD-RIT offers the following options: - “1000" - “10,000" - “20,000" - “24,000" - “100,000" - “250,000" - “1,000,000" - “2,500,000"	Y	Y	dataqual-lineage-srcinfo-srcscale
TYPESRC1	Media of 1st source	C(20)	Free text, "paper", "stable-base material", "microfiche", "microfilm", "audiocassette", "chart", "filmstrip", "transparency", "videocassette", "videodisc", "videotape", "physical model", "computer program", "disc", "cartridge tape", "magnetic tape", "online", "CD-ROM", "electronic bulletin board", "electronic mail system"	Y	Y	dataqual-lineage-srcinfo-typesrc
BEGDATE1	Creation date of 1st source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	Y	Y	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-begdate

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE1	Finish date of 1st source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	Y	Y	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-enddate
SRCCURR1	Currentness of 1st source	C(35)	Free Text. Date or other indication of the currentness of the source data.	Y	Y	dataqual-lineage-srcinfo-srctime-srccurr
SRCCITEA1	Abbreviation of 1st source	C(20)	Free Text. Name associated with source entry.	Y	Y	dataqual-lineage-srcinfo-srccitea
SRCCONTR1	A values in % describing the contribution of the source to the data	N(3,0)	Contribution of source information relative to all available (1 - 100)	Y	Y	dataqual-lineage-srcinfo-srccontr
ORIGIN2	Originator of 2nd source	C(30)	Free Text, " Unknown". Acronym or name of the Agency that provided the information the reach indexing is based on. (EPA, USGS, ect).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-origin
TITLE2	Title/description of 2nd source	C(150)	Free Text. Brief description of the source data (what it contains and what is the format).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-title

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SRCSCALE2	Scale of 2nd source	C(12)	Free Text. NHD-RIT offers the following options: - “1000" - “10,000" - “20,000" - “24,000" - “100,000" - “250,000" - “1,000,000" - “2,500,000"	N	N	dataqual-lineage-srcinfo-srcscale
TYPESRC2	Media of 2nd source	C(20)	Free text, "paper", "stable-base material", "microfiche", "microfilm", "audiocassette", "chart", "filmstrip", "transparency", "videocassette", "videodisc", "videotape", "physical model", "computer program", "disc", "cartridge tape", "magnetic tape", "online", "CD-ROM", "electronic bulletin board", "electronic mail system"	N	N	dataqual-lineage-srcinfo-typesrc
BEGDATE2	Creation date of 2nd source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-begdate

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE2	Finish date of 2nd source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-enddate
SRCCURR2	Currentness of 2nd source	C(35)	Free Text. Date or other indication of the currentness of the source data.	N	N	dataqual-lineage-srcinfo-srctime-srccurr
SRCCITEA2	Abbreviation of 2nd source	C(20)	Free Text. Name associated with source entry.	N	N	dataqual-lineage-srcinfo-srccitea
SRCCONTR2	A values in % describing the contribution of the source to the data	N(3,0)	Contribution of source information relative to all available (1 - 100)	N	N	dataqual-lineage-srcinfo-srccontr
ORIGIN3	Originator of 3rd source	C(30)	Free Text, " Unknown". Acronym or name of the Agency that provided the information the reach indexing is based on. (EPA, USGS, ect).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-origin
TITLE3	Title/description of 3rd source	C(150)	Free Text. Brief description of the source data (what it contains and what is the format).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-title

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SRCSCALE3	Scale of 3rd source	C(12)	Free Text. NHD-RIT offers the following options: - “1000" - “10,000" - “20,000" - “24,000" - “100,000" - “250,000" - “1,000,000" - “2,500,000"	N	N	dataqual-lineage-srcinfo-srcscale
TYPESRC3	Media of 3rd source	C(20)	Free text, "paper", "stable-base material", "microfiche", "microfilm", "audiocassette", "chart", "filmstrip", "transparency", "videocassette", "videodisc", "videotape", "physical model", "computer program", "disc", "cartridge tape", "magnetic tape", "online", "CD-ROM", "electronic bulletin board", "electronic mail system"	N	N	dataqual-lineage-srcinfo-typesrc
BEGDATE3	Creation date of 3rd source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-begdate

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE3	Finish date of 3rd source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-enddate
SRCCURR3	Currentness of 3rd source	C(35)	Free Text. Date or other indication of the currentness of the source data.	N	N	dataqual-lineage-srcinfo-srctime-srccurr
SRCCITEA3	Abbreviation of 3rd source	C(20)	Free Text. Name associated with source entry.	N	N	dataqual-lineage-srcinfo-srccitea
SRCCONTR3	A values in % describing the contribution of the source to the data	N(3,0)	Contribution of source information relative to all available (1 - 100)	N	N	dataqual-lineage-srcinfo-srccontr
ORIGIN4	Originator of 4th source	C(30)	Free Text, " Unknown". Acronym or name of the Agency that provided the information the reach indexing is based on. (EPA, USGS, ect).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-origin
TITLE4	Title/description of 4th source	C(150)	Free Text. Brief description of the source data (what it contains and what is the format).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-title

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SRCSCALE4	Scale of 4th source	C(12)	Free Text. NHD-RIT offers the following options: - “1000" - “10,000" - “20,000" - “24,000" - “100,000" - “250,000" - “1,000,000" - “2,500,000"	N	N	dataqual-lineage-srcinfo-srcscale
TYPESRC4	Media of 4th source	C(20)	Free text, "paper", "stable-base material", "microfiche", "microfilm", "audiocassette", "chart", "filmstrip", "transparency", "videocassette", "videodisc", "videotape", "physical model", "computer program", "disc", "cartridge tape", "magnetic tape", "online", "CD-ROM", "electronic bulletin board", "electronic mail system"	N	N	dataqual-lineage-srcinfo-typesrc
BEGDATE4	Creation date of 4th source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-begdate

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE4	Finish date of 4th source	Date	Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-enddate
SRCCURR4	Currentness of 4th source	C(35)	Free Text. Date or other indication of the currentness of the source data.	N	N	dataqual-lineage-srcinfo-srctime-srccurr
SRCCITEA4	Abbreviation of 4th source	C(20)	Free Text. Name associated with source entry.	N	N	dataqual-lineage-srcinfo-srccitea
SRCCONTR4	A values in % describing the contribution of the source to the data	N(3,0)	Contribution of source information relative to all available (1 - 100)	N	N	dataqual-lineage-srcinfo-srccontr
ORIGIN5	Originator of 5th source	C(30)	Free Text, " Unknown". Acronym or name of the Agency that provided the information the reach indexing is based on. (EPA, USGS, ect).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-origin
TITLE5	Title/description of 5th source	C(150)	Free Text. Brief description of the source data (what it contains and what is the format).	N	N	dataqual-lineage-srcinfo-srccite-citeinfo-title

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
SRCSCALE5	Scale of 5th source	C(12)	Free Text. NHD-RIT offers the following options: - “1000" - “10,000" - “20,000" - “24,000" - “100,000" - “250,000" - “1,000,000" - “2,500,000"	N	N	dataqual-lineage-srcinfo-srcscale
TYPESRC5	Media of 5th source	C(20)	Free text, "paper", "stable-base material", "microfiche", "microfilm", "audiocassette", "chart", "filmstrip", "transparency", "videocassette", "videodisc", "videotape", "physical model", "computer program", "disc", "cartridge tape", "magnetic tape", "online", "CD-ROM", "electronic bulletin board", "electronic mail system"	N	N	dataqual-lineage-srcinfo-typesrc
BEGDATE5	Creation date of 5th source	Date	Free Text. Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-begdate

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ENDDATE5	Finish date of 5th source	Date	Free Text. Indicates the time frame for the creation of the source data used to do the indexing (yyyymmdd)	N	N	dataqual-lineage-srcinfo-srctime-timeinfo-rngdates-enddate
SRCCURR5	Currentness of 5th source	C(35)	Free Text. Date or other indication of the currentness of the source data.	N	N	dataqual-lineage-srcinfo-srctime-srccurr
SRCCITEA5	Abbreviation of 5th source	C(20)	Free Text. Name associated with source entry.	N	N	dataqual-lineage-srcinfo-srccitea
SRCCONTR5	A values in % describing the contribution of the source to the data	N(3,0)	Contribution of source information relative to all available (1 - 100)	N	N	dataqual-lineage-srcinfo-srccontr
ENTTYPDS	Description of the entity type	C(55)	'The metadata ID is a system-created unique identifier'	Y	A	eainfo-detailed-enttype-enttypds
ATTRLABL1	Label for the 1st field in the table	C(8)	'EVENT_ID'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF1	Definition of the 1st field in the table	C(170)	'Unique ID for an event created based on data and time when the event was created, and a sequential number to provide uniqueness for events created at the same time'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS1	Source of the values for the 1st field	C(21)	'System created number'	Y	A	eainfo-detailed-attr-attrdefs
RDOMMIN1	Minimum value	C(19)	'20000101000001000012'	Y	A	eainfo-detailed-attr-rdom-rdommin

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
RDOMMAX1	Maximum value	C(19)	'9999123124000099999'	Y	A	eainfo-detailed-attr-rdom-rdommax
For linear/point event and waterbody metadata table only (Note: ATTRLABL2, ATTRLABL3, ATTRLABL4 and the associated fields are intentionally not included in the non-NHD shapefiles):						
ATTRLABL2	Label for the 2nd field in the table	C(6)	'DUU_ID'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF2	Definition of the 2nd field in the table	C(65)	'Unique identifier of the digital update unit in the NHD database'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS2	Source of the values for the 2nd field	C(3)	'NHD'	Y	A	eainfo-detailed-attr-attrdefs
RDOMMIN2	Minimum value	C(10)	'0000000001'	Y	A	eainfo-detailed-attr-rdom-rdommin
RDOMMAX2	Maximum value	C(10)	'9999999999'	Y	A	eainfo-detailed-attr-rdom-rdommax
ATTRLABL3	Label for the 3rd field in the table	C(8)	'RCH_CODE'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF3	Definition of the 3rd field in the table	C(254)	'Numeric code that uniquely identifies a reach in NHD, consisting of two parts: the first eight digits are the hydrologic unit code of the cataloging unit in which the reach is located; the last six digits are sequentially, arbitrarily-assigned number'	Y	A	eainfo-detailed-attr-attrdef

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ATTRDEFS3	Source of the values for the 3rd field	C(3)	'NHD'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN3	Title of the codeset	C(15)	'NHD Reach code'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS3	Authority for the codeset	C(8)	'FIPS/NHD'	Y	A	eainfo-detailed-attr-codesetd-codesets
ATTRLABL4	Label for the 4th field in the table	C(8)	'RCH_DATE'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF4	Definition of the 4th field in the table	C(65)	'Date that the REACH _CODE was assigned, displayed at YYYYMMDD'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS4	Source of the values for the 4th field	C(3)	'NHD'	Y	A	eainfo-detailed-attr-attrdefs
RDOMMIN4	Minimum value	C(8)	'19970101'	Y	A	eainfo-detailed-attr-rdom-rdommin
RDOMMAX4	Maximum value	C(8)	'99991231'	Y	A	eainfo-detailed-attr-rdom-rdommax
ATTRLABL5	Label for the 5th field in the table	C(5)	'STATE'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF5	Definition of the 5th field in the table	C(50)	'State abbreviation according to the FIPS standard'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS5	Source of the values for the 5th field	C(10)	'User input'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN5	Title of the codeset	C(40)	'Federal Information Processing Standard'	Y	A	eainfo-detailed-attr-codesetd-codesetn

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
CODESETS5	Authority for the codeset	C(40)	'Two digit FIPS state code (character)'	Y	A	eainfo-detailed-attr-codesetd-codesets
ATTRLABL6	Label for the 6th field in the table	C(9)	'ENTITY_ID'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF6	Definition of the 6th field in the table	C(130)	'Identifier used to aggregate reaches into homogenous units. It also is used to link the event table to external data sources'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS6	Source of the values for the 6th field	C(7)	'Unknown'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN6	Title of the codeset	C(12)	'Alphanumeric'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS6	Authority for the codeset	C(5)	'ASCII'	Y	A	eainfo-detailed-attr-codesetd-codesets
ATTRLABL7	Label for the 7th field in the table	C(8)	'ATTR_PRG'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF7	Definition of the 7th field in the table	C(55)	'Indicates the attribute type or program being indexed'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS7	Source of the values for the 7th field	C(7)	'Unknown'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN7	Title of the codeset	C(12)	'Alphanumeric'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS7	Authority for the codeset	C(5)	'ASCII'	Y	A	eainfo-detailed-attr-codesetd-codesets

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
ATTRLABL8	Label for the 8th field in the table	C(8)	'ATTR_VAL'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF8	Definition of the 8th field in the table	C(65)	'Value associated with the attribute program in field attr_prg'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS8	Source of the values for the 8th field	C(7)	'Unknown'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN8	Title of the codeset	C(12)	'Alphanumeric'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS8	Authority for the codeset	C(5)	'ASCII'	Y	A	eainfo-detailed-attr-codesetd-codesets
For linear/point event metadata table only (Note: ATTRLABL9 and its associated fields are intentionally not included in waterbody metadata and the non-NHD shapefile metadata):						
ATTRLABL9	Label for the 9th field in the table	C(6)	'F_MEAS'/'P_MEAS'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF9	Definition of the 9th field in the table	C(55)	'Specifies the start point of the event along a route'/'Specifies the position of the point event along a route'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS9	Source of the values for the 9th field	C(20)	'Reach Indexing Tool'	Y	A	eainfo-detailed-attr-attrdefs
RDOMMIN9	Minimum value	C(1)	'0'	Y	A	eainfo-detailed-attr-rdom-rdommin
RDOMMAX9	Maximum value	C(3)	'200'	Y	A	eainfo-detailed-attr-rdom-rdommax

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Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
For linear metadata table only (Note: ATTRLABL10 and its associated fields are intentionally not included in point and waterbody metadata and the non-NHD shapefile metadata):						
ATTRLABL10	Label for the 10th field in the table	C(6)	'T_MEAS'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF10	Definition of the 10th field in the table	C(55)	'Specifies the end points of the event along a route'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS10	Source of the values for the 10th field	C(20)	'Reach Indexing Tool'	Y	A	eainfo-detailed-attr-attrdefs
RDOMMIN10	Minimum value	C(1)	'0'	Y	A	eainfo-detailed-attr-rdom-rdommin
RDOMMAX10	Maximum value	C(3)	'200'	Y	A	eainfo-detailed-attr-rdom-rdommax
For linear/point metadata table only (Note: ATTRLABL11 and its associated fields are intentionally not included in waterbody metadata and the non-NHD shapefile metadata):						
ATTRLABL11	Label for the 11th field in the table	C(10)	'EOFFSET'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF11	Definition of the11th field in the table	C(200)	'Specifies the distance in coverage units that a linear/point event should be drawn offset from the reach. For a point event, the point is offset perpendicular from the reach.'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS11	Source of the values for the 11th field	C(20)	'User input'	Y	A	eainfo-detailed-attr-attrdefs

(continued)

Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
CODESETN11	Title of the codeset	C(20)	'Real numbers'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS11	Authority for the codeset	C(20)	'Real numbers'	Y	A	eainfo-detailed-attr-codesetd-codesets
For linear/waterbody event and non-NHD waterbody/linear shapefile metadata table only:						
ATTRLABL12	Label for the 12th field in the table	C(10)	'METERS'/ 'SQ_KM'	Y	A	eainfo-detailed-attr-attrlabl
ATTRDEF12	Definition of the 12th field in the table	C(52)	'Specifies the size of the event'	Y	A	eainfo-detailed-attr-attrdef
ATTRDEFS12	Source of the values for the 12th field	C(20)	'Reach Indexing Tool'	Y	A	eainfo-detailed-attr-attrdefs
CODESETN12	Title of the codeset	C(20)	'Real numbers'	Y	A	eainfo-detailed-attr-codesetd-codesetn
CODESETS12	Authority for the codeset	C(20)	'Real numbers'	Y	A	eainfo-detailed-attr-codesetd-codesets
METD	Date when the metadata was created	Date	yyyymmdd	Y	A	metainfo-metd
M_CNTPER	Name of the contact person, if there are questions concerning the data	C(50)	Free Text. Note: The NHD-RIT populates this field with the User Information entered during the indexing session.	Y	N	metainfo-metc-cntperp-cntper
M_CNTORG	Organization the person works for	C(50)	Free Text.	Y	N	metainfo-metc-cntperp-cntorg

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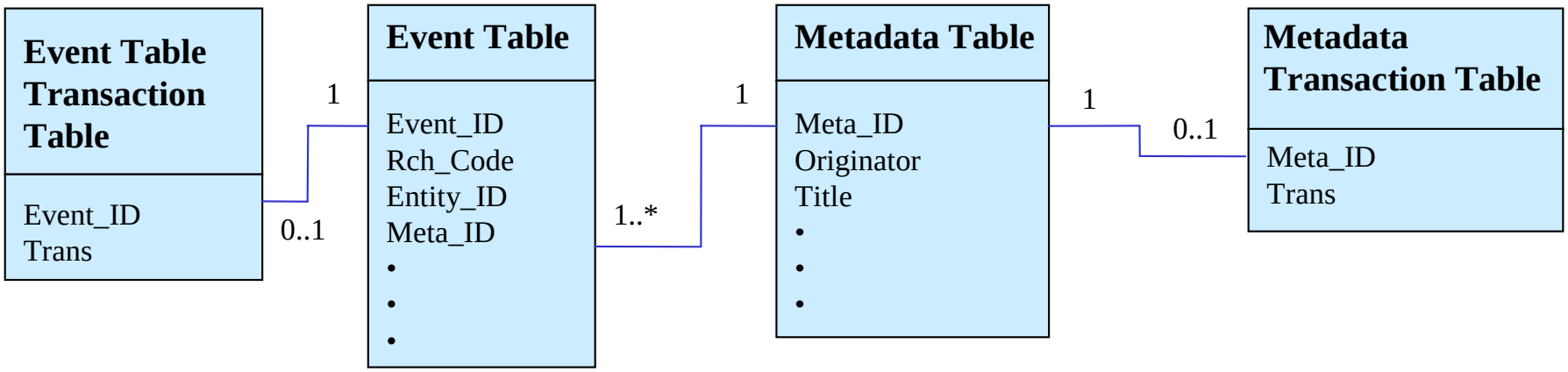
Field Name	Description	Data Type	Values/Format	Required	Required User Input (Default value in parentheses) Y = Required N = Not required A = Populated by the RIT	FGDC Standard Name
M_ADDRTYPE	What type of address is given below	C(15)	Free Text, “Mail”, “Physical”, “Physical/Mail”	N	N	metainfo-metc-cntaddr-addrtype
M_ADDRESS	Address of contact person	C(100)	Free Text.	N	N	metainfo-metc-cntaddr-address
M_CITY	City of contact person	C(25)	Free Text.	N	N	metainfo-metc-cntaddr-city
M_STATE	State of contact person	C(30)	Free Text.	N	N	metainfo-metc-cntaddr-state
M_POSTAL	Zip code	C(11)	Free Text.	N	N	metainfo-metc-cntaddr-postal
M_CNTVOICE	Voice phone number	C(10)	nnnnnnnnnn	N	N	metainfo-metc-cntvoice
M_CNTFAC	Fax phone number	C(10)	nnnnnnnnnn	N	N	metainfo-metc-cntaddr-cntfac
M_CNTEMAIL	E-mail of contact person	C(75)	Free Text.	N	N	metainfo-metc-cntaddr-cntemail
METSTDN	The name of the metadata standard used to document the data set	C(55)	‘FGDC Content Standards for Digital Geospatial Metadata’	Y	A	metainfo-metstdn
METSTDV	Identification of the version of the metadata standard used to document the data set	C(45)	‘Version 2 - 1998 (FGDC-STD-001 June 1998)’	Y	A	metainfo-metstdv

Figure 1. Relationship Between Event, Metadata, and Transaction Tables



Legend

1	One and only one (if not shown, '1' is implied)
0..1	Zero or one
1..*	From one to any positive integer